433 Teams

OBSTETRICS & GYNECOLOGY

Pelvic Floor Disorders

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Pelvic floor disorders:

- pelvic prolapse
- urinary incontinence
- anal incontinence.

It affect women in their daily activity , exercises and quality of life. also lead to sexual dysfunction.
The life time risk 11% of surgeries leading to **urinary incontinence.**
one of the indication of hysterectomy in 45 years and older is **prolapse**.

pelvic organ support:
levator ani muscles + urogenital diaphragm+ pelvic fascia + uterus cardinal ligament. all theses structure
support pelvic organ and it may get weaker with ageing or develop anatomic defect after delivery.

Pelvic organ prolapse:

-It is a descending of one or more of pelvic structures.

- **protrusion of the pelvic organs into or out of the vaginal canal. They result from weakness in the pelvic muscular (levator ani) and fascial structural support.**

Anterior wall of vagina :

cystocele ***most common***

posterior wall of vagina

rectocele.

peritoneum of cup-de sac

enterocele.

-50% of pares women who had vaginal delivery will have some prolapse by clinical exam but It **have no symptoms and not affecting the functions.**

-**physical findings** may not correlate with specific pelvic symptoms.

Types of pelvic organ prolapse:

Uterine prolapse:

- **Symptoms:** heaviness or fullness in pelvis, feeling of something falling out, difficulty walking.

Cystocele:

- **Symptoms:** urinary frequency and urgency, urinary incontinence, urinary retention

Rectocele:

- **Symptoms:** difficulty emptying her rectum, constipation, and the need to splint.

Entrocele:

- 1. Backache or pulling sensation when standing relieved by lying down.
- 2. Uncomfortable pressure with falling out sensation in the vagina.

Pelvic organ prolapse:

symptoms:

- **1- vaginal pressure or heaviness.**
- **2- abdominal\ lower back pain.**
- **3- vaginal\ perineum pain or discomfort. 'mass sensation or something plugging'**
- **4- urinary or fecal loss or retention.**
- **5- sexual health issues.**

Predisposing factors:

1- Stretching of the pelvic support by pregnancy and labor especially with use of forceps or Ventouse extractor.

2- Chronically increase of **intra-abdominal pressure** **(chronic cough, constipation, heavy lifting, ascites).**

Risk factors:

- **1- one vaginal delivery or more.**
- **2- genetic predisposition.**
- **3- menopause.**
- **4- advance age.**
- **5- prior pelvic surgery.**
- **6- connective tissue diseases.**
- **7- increase in intra abdominal pressure.**

Pelvic organ prolapse:

Evaluation of pelvic organ prolapse:

it is an comprehensive exam to evaluate the severity of prolapse.

Diagnosis :

Vaginal examination is facilitated by using a single- blade speculum. While depressing the posterior vaginal wall, the patient is asked to strain down.

Rectal-vaginal examination is often useful to demonstrate a rectocele and to distinguish it from an enterocele.

pelvic organ prolapse quantification examination ' POP-Q' :

The preferred method to describe and document the severity of POP , The extent of prolapse is evaluated and measured relative to the hymen, which is a fixed anatomic landmark. "it have 5 stages"

See table 23-1

TABLE 23-1

PELVIC ORGAN PROLAPSE STAGING SYSTEM

Stage	Characteristics
0	No prolapse Aa, Ba, Ap, Bp are –3 cm and C or D ≤ –(tvl –2) cm
1	Most distal portion of the prolapse –1 cm (above the level of hymen)
2	Most distal portion of the prolapse ≥ –1 cm but ≤ +1 cm (≤1 cm above or below the hymen)
3	Most distal portion of the prolapse > +1 cm but < +(tvl – 2) cm (beyond the hymen; protrudes no farther than 2 cm less than the total vaginal length)
4	Complete eversion; most distal portion of the prolapse ≥ +(tvl – 2) cm

Treatment of pelvic prolapse :

non surgical :

- 1-mild degree of pelvic relaxation is present, pelvic floor **muscle exercises** may improve the tone of the pelvic floor musculature.

  2- Pessaries, which pro- vide intravaginal support, may be used to correct prolapse by "propping up" the vagina. They can be considered when the patient is medically unfit or refuses surgery or during pregnancy and the post- partum period

  * it is used by 75% of gynaecological as **first line treatment.**

  *it have different shapes:

  Ring (A): for mild prolaps **gell-horn or cube (D+I)** : higher degree of prolaps.

surgical:

- 1- **hysterctomy** + apical support.

  How we provide apical support? a- urterosacral ligament suspension

  b- sacrospinous ligament suspension. *which mean fixing the vagina to one of these structures*

  2- **abdomial sacral colopexy** :Reconstruction is achieved with an open abdominal technique or with the use of minimally invasive techniques.

  3**- colpocleisis** : is a procedure involving closure of the vagina.In older women who are no longer sexually active and there is a risk a complications of invasive surgeries.

Urinary incontinence

Stress incontinence

Stress incontinence: **leakage of urine when there is increase in the intra abdominal pressure like in (coughing + jumping + sneezing)**

This is the most common type of incontinence (20-75%).

-25% of women who had vaginal delivery they will develop 4-6 months urinary incontinence.

aetiology of stress incontinence:

1- urethral hyper-mobility.

2- Intrinsic sphincter deficiency.

Treatment :

1- **Kegel exercise**s to increase the strength of peri urtheral\ peri vaginal muscles.

2- hormonal replacement therapy.

3- surgical options if conservative treatment fail **: tension free vaginal tape** by placing a mesh around mid urethra

4- bulking agent: injection to proximal urethra to patients with intrinsic sphincter urethral deficiency.

* we do this if surgery failed or if surgery is contraindicated to the patient.

Urinary incontinence

Stress incontinence

Clinical findings:

- 1- Hx of loss urine loss because of coughing, sneezing, laughing, or physical activity.
- 2- No loss of urine when patient is supine or sleep (unique to stress type)
- 3- Cystocele or urethrocele, anterior vaginal wall prolapsed (maybe).

Diagnosis:

- 1- Urine culture to roll out infection.
- 2- Cystometrogram*is normal (no involuntary detrusor contraction, (residual volume, bladder capacity, sensation) all are normal).
- 3- Urinary leakage seen with voluntary stress.
- 4- Positive cotton-tipped test **(Q-tip or Bonney), which shows poor anatomic support, the angle of Q-tip will change more than 31 degree when Intraabdominal pressure is ↑.
- 5- Normal neurologic examination.

***is a clinical diagnostic procedure used to evaluate bladder function. Specifically, it measures contractile force of the bladder when voiding.**

****To perform the Q-Tip test, a sterile, well-lubricated cotton-tipped swab is placed in to the urethra. The patient is then asked to perform a bowel movement or Valsalva strain.**

Treatment of pelvic prolapse :

It depend on patient prevention and status

First : Prophylactic measures to mitigate the symptoms of POP include identifying and treating chronic respiratory and metabolic disorders, correction of constipation and intraabdominal disorders that may cause repetitive increases in intraabdominal pressure.

Urinary incontinence

urge incontinence

is defined as the involuntary leakage of urine accompanied by or immediately preceded by urgency.
It is **associated with a strong desire to pass urine with a decreased ability to control it.**

In normal sitting :

detrusor muscle allow the bladder to fill in low resistance sitting. The volume may increases but the the muscle will stretch to hold the urine. But if we have overactive detrusor muscle so the feel the urge to urinate.

-**Symptoms:** urgency, frequency, and unpredictable loss of volume (urine).
-Physical examination: normal.
-**Diagnosis:** confirmed by all of the following in cystometrogram:
1- Involuntary bladder contraction associated with leakage.
2- Normal residual volume and sensation.
3- ↓urge-to-void volume.

Treatment:

1- Behavior therapy: Bladder training.
2- anti-cholinergic medication: **oxybutynin chloride (Ditropan) and tolterodine (Detrol).**
3-NSAID: (ibuprofen) inhibit bladder contraction.

Other types of Urinary incontinence

1- mixed (stress incontinence + urge incontinence)
2-Overflow urinary incontinence
3- Fistula **(If there is pelvic surgeries + radiation)**

BOX 23-1 ***Risk Factors Associated with Overactive Bladder***

- Older age
- Chronic disorders (e.g., multiple sclerosis, dementia, Alzheimer's disease, spinal cord injury, stroke, diabetes mellitus)
- Pregnancy (may contribute to neural injury or development of pelvic organ prolapse)
- Menopause (estrogen deficiency causes urogenital atrophy and impaired bladder capacity)
- Pelvic surgery (scarring or operative trauma may injure nerves and supportive structures)
- Obesity (increases bladder pressure)
- Immobility (impairs ability to toilet, particularly in older patients)
- Medications (e.g., diuretics, calcium channel blockers, and psychotropic agents)
- Smoking (increases risk for chronic coughing)

Case discussion

CASE: A 75-year-old woman G5P5 woman presents for an annual exam and reports a "fullness" in the vaginal area. The symptom is more noticeable when she is standing for a long time. This feeling is bothersome to her and is affecting her daily activities. She does not complain of urinary or fecal incontinence. She has no other urinary or gastrointestinal symptoms. There has been no vaginal bleeding. Her past medical history is significant for well-controlled hypertension and chronic bronchitis. She has never had surgery.

Pelvic exam reveals normal appearing external genitalia except for generalized atrophic changes. The vagina and cervix are without lesions. Relaxation of the anterior and posterior vaginal wall are noted to approximately one centimeter beyond the hymen when she is asked to Valsalva. The cervix also descends to the level of the hymen with Valsalva. Uterus is normal size. Ovaries are not palpable. No rectal masses are noted. Rectal sphincter tone is slightly decreased. The patient wishes to discuss options for treatment.

Case discussion

What are the most important support mechanisms for the pelvic organs?

• Levator ani muscles in combination with ligaments and connective tissues (such as the uterosacral ligaments for the uterus and vaginal apex, and the vesicovaginal and rectovaginal connective tissues for the anterior and posterior vaginal wall) create support for the pelvic organs. When one or both of these support mechanisms is compromised, pelvic organ prolapse can occur if the other mecha- nism is unable to compensate.

What increases this patient's risk for pelvic organ prolapse?

• The risk of pelvic organ prolapse is very multifactorial. The greatest risk factor for pelvic organ prolapse **is pregnancy and delivery**. Other risk factors can include increased intra-abdominal pressure (from a chronic cough, habitual straining, heavy lifting, or constipation), obesity and genetics.

Case discussion

What are the symptoms of pelvic organ prolapse?

Many women with prolapse will complain of seeing or feeling a bulge in the vaginal area. Heaviness or fullness in the vagina or “something falling out” are common complaints. Many women will complain of worsening symptoms with prolonged standing. Often women will relate that symptoms are relieved with lying down.
Urinary frequency, urgency, incontinence or retention can be associated with anterior vaginal wall pro- lapse. The need for rectal splinting, or replacing the posterior vaginal wall to complete stool evacuation, can be associated with posterior vaginal wall prolapse.

What are the different types of pelvic organ prolapse?

Anterior vaginal prolapse – cystourethrocele, cystocele
Apical vaginal prolapse – uterovaginal, vaginal vault (post surgery) – vaginal vault prolapse is often an en Terocele Posterior vaginal prolapse – rectocele

Case discussion

What are the steps in evaluating someone with prolapse?

The most important thing to evaluate is patient bother. Prolapse is not dangerous for a woman unless it is impacting her ability to empty her bladder (**causing urinary retention**).
The Pelvic Organ Prolapse Quantitative (POPQ) is an objective evaluation tool that gynecologists and pelvic floor specialists (Urogynecologists) use to measure prolapse. Grading systems (such as the Baden Walker system) may also be used to document prolapse.
If indicated, evaluation for urinary retention (such as performance of a post void residual) should be completed.
Some providers will also evaluate levator muscle strength by asking a woman to perform a Kegel squeeze on examination.

surgery indicated for prolapse?

Patient desire for definitive surgical correction
Recurrent vaginal ulcerations or other **complications of pessary use**

Case discussion

What are the different types of urinary incontinence?

Stress urinary incontinence: **the complaint of involuntary leakage of urine associated with exertion effort, sneezing or coughing**
Urge incontinence: the complaint of involuntary leakage of urine associated with or immediately preceded byurgency.
Thepatientmightcomplainoffeelingtheurgetourinatewithsubsequentleakageofurine.
Mixed urinary incontinence: a combination of stress and urge incontinence
Continuous incontinence: continual urine passage (commonly caused by vesicovaginal fistula)

What are the steps in evaluating someone with urinary incontinence?

Evaluation of a patient who complains of urinary incontinence should include questions to clarify what type of incontinence they are experiencing, along with a physical examination and a urinalysis.
Many providers may do a cough stress test or a post void residual to further evaluate bladder function during physical examination. Urodynamic testing may be performed if the provider feels that this is war- ranted. Some providers will have patients fill voiding diaries to evaluate symptoms.

Case discussion

What are nonsurgical treatment options for urinary incontinence?

Behavioral modification is important to discuss with patients with incontinence symptoms. Decreasing bladder irritants and timed voids can be important and low risk treatments for many women.

Pelvic floor physical therapy or muscle strengthening exercises (Kegel's) can be important and effective in managing urinary incontinence symptoms. This might include biofeedback and/or bladder retraining,

Medical therapy primarily focused on treatment of detrusor overactivity (the pathophysiology associated with urgency and urge incontinence) can include anticholinergics.

Incontinence pessaries can be effective for the treatment of stress incontinence symptoms.

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